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basic imagery interpretation report

Tyuratam Space Launch Site A1
USSR (S)

MISSILE RANGES: STRATEGIC SSM SPACE FACILITIES

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RCA-15/0003/80
SEPTEMBER 1980
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INSTALLATION OR ACTIVITY NAME					COUNTRY
Tyuratam Space Launch Site A1					UR
UTM COORDINATES	GEOGRAPHIC COORDINATES	CATEGORY	BE NO.	COMIREX NO.	NIETB NO.
NA	45-55-16N 063-20-30E				

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MAP REFERENCE

SAC. USATC, Series 200, Sheet 0246-13, scale 1:200,000

LATEST IMAGERY USED	NEGATION DATE (If required)
	NA

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ABSTRACT

1. (TSR) Tyuratam Space Launch Site A1 supports the SL-03, SL-04, and SL-06 space vehicles—all versions of the SS-6 ICBM. All of these space launch vehicles are assembled and tested at Test Support Facility 1 and launched from Launch Site A1.

2. (S/D) Since the previous NPIC report, [redacted] published in December 1966, two major periods of refurbishment activity—during the spring of 1970 and the late winter-spring of 1979—have been observed at Launch Site A1. No modifications to the launch pad or to the service gantry tower have been observed. Several ancillary features at the site have been modified or constructed.

3. (S/D) This report describes this refurbishment activity at the launch pad, the modifications and additions at the launch site, and the major additions to buildings at Test Support Facility 1. This report includes five annotated photographs and a location map.

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INTRODUCTION

4. [redacted] Tyuratam Space Launch Site A1 is in the center of the Tyuratum rangehead, approximately 20 nautical miles north of the main support base (Figures 1 and 2). Site A1 and Test Support Facility 1 [redacted] the original facilities at the Tyuratam Missile and Space Test Center (MSTC), were in use when the first US overhead photography of the rangehead was obtained in late August 1957. The facilities were probably started in 1955 and were completed in early 1957.[1] During the period 1957 to 1960, all SS-6 ICBMs and space vehicle versions of the SS-6 were fired from site A1. With the completion of Tyuratam Space Launch Site B1 in late 1960, the SS-6 ICBM firings were moved to site B1. Since 1961, Site A1 has only been involved in supporting space vehicle launches and is the primary manned space launch pad at the test center. Refurbishment, modifications, and additions have been observed since December 1966.[2]

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BASIC DESCRIPTION

5. (S/D) Launch Site A1 consists of a large, square launch pad positioned over a large exhaust pit (Figure 3). An opening 15 meters in diameter is centered in the launch pad with seven movable vertical arms mounted around and on the aperture ring within the opening in the launch pad. Four of the seven vertical arms serve as launch vehicle stabilization arms, two serve as service tower arms, and one serves as a support arm for the necessary umbilical connections to the launch vehicle (Figure 4).[3] The two service tower arms have circular work platforms which encircle the launch vehicle during the checkout phase prior to launching. The loading azimuth of the launch pad is 90 degrees. The pad is flanked by a pair of lightning arrester towers, each about 73 meters high.

6. (S/D) In April 1970, a major refurbishment of the launch site was underway, as was a reconstruction of the south wall of the exhaust pit. Equipment, material, and vehicles were seen on the launch pad apron. Also, the roof had been removed from a partially underground building exposing at least 30 small-diameter tanks. Additions were made to this building during the January 1979 refurbishment that tripled it in size. No additional tanks were identified during the 1979 refurbishment.

7. (S/D) In January 1979, the second known refurbishment of the launch site was underway. Equipment, material, and vehicles were seen again on the launch pad apron. During this refurbishment the seven movable vertical arms that make up the gantry service tower were removed from the launch pad aperture, placed on the pad approach apron (Figure 3), and later reassembled. No modifications to the gantry service tower were observed. Because of the lack of timely coverage in April 1979, it is not known if the gantry service tower was taken down and later reassembled. The construction activity seen at site A1 during the latest refurbishment consisted of tripling the size of the partially underground, propellant-related building; the addition of a support building; the excavation of seven small-diameter silo corings (Figure 5); and the excavation of several trenches within the exhaust pit. The function of the small-diameter (approxi-

[redacted]

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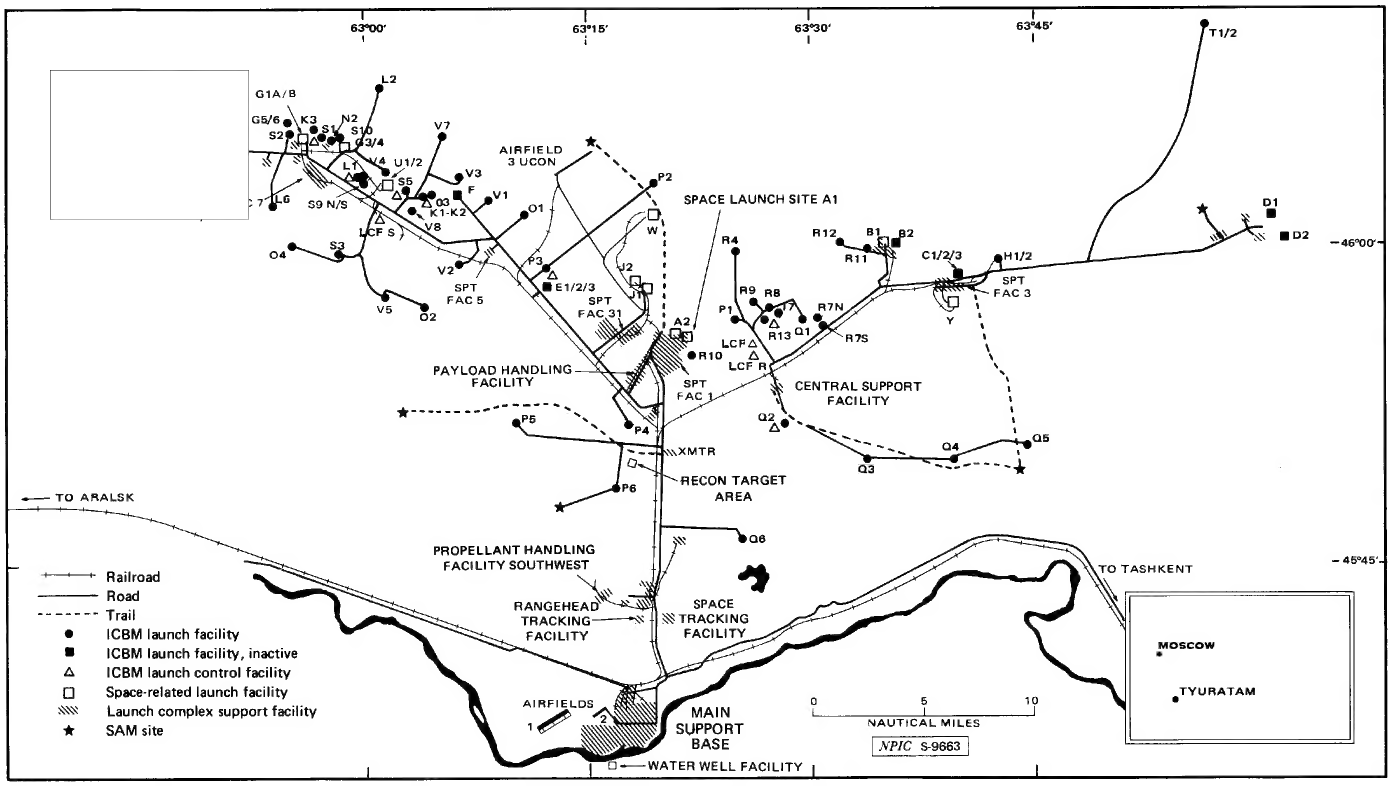
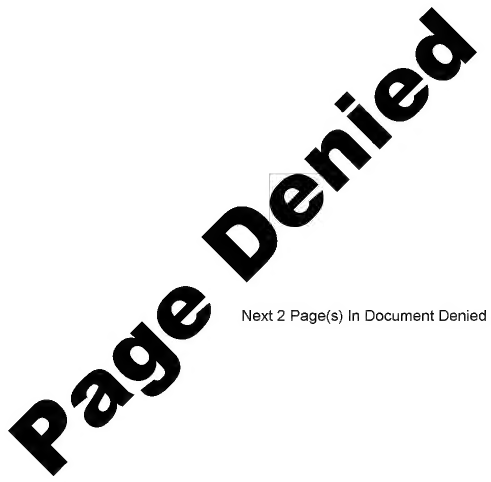


FIGURE 1. FACILITIES AT TYURATAM MISSILE/SPACE TEST CENTER SSM, USSR



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mately [redacted] silo corings is not known. When this area was last observed, a cover had been placed over each approximately [redacted] coring. 25X1 25X1

8. (TSR) On [redacted] an SL-04 launch vehicle was seen erected on launch pad A1 (Figure 6). Since this vehicle was not launched, it was probably being used to check out the launch pad for an actual launch in the future. 25X1

9. (TSR) Test Support Facility 1 (Figure 2) is connected by rail to Space Launch Site A1 and to Space Launch Site J1/2 and has supported both launch sites. Originally, it consisted of two assembly and checkout areas. The first area contains the original assembly building and a spacecraft preparation building that has supported sites J1/2 and A1. An addition to the original assembly building was constructed between July 1973 and May 1974. Also, an addition was made to the spacecraft preparation building between December 1968 and February 1970. The second assembly and checkout area supported the SS-6 payloads—both weapons and space. With the completion of Space Launch Site B1, this area supported the SS-9 weapons program and subsequently supported the SS-17 and SS-18 weapons programs. The area is now designated the Tyuratam MSTC Payload Handling Facility [redacted] 25X1

REFERENCES

IMAGERY

(TSR) All applicable KEYHOLE imagery acquired from July 1966 through [redacted] was used in the preparation of this report. 25X1

MAPS OR CHARTS

SAC. US Air Target Chart, Series 200, Sheet 0246-13, scale 1:200,000 (UNCLASSIFIED)

DOCUMENTS

1. DOD/FTD. [redacted] DST-1070S-311-76-SA0, *Tyuratam Missile Test Range (U)* 27 Aug 79 (TOP SECRET [redacted] 25X1 25X1

2. NPIC [redacted] *Tyuratam Missile Test Center Launch Complex A*, Dec 66 (TOP SECRET [redacted] 25X1

3. *Air et Cosmos* (magazine, in French), No 710, 18 March 1978 (UNCLASSIFIED)

RELATED DOCUMENT

NPIC [redacted] RCA-15/0006/79, *Activity and Developments at Tyuratam Missile/Space Test Center SSM, May 1978—November 1979 (TSR)*, Apr 80 (TOP SECRET [redacted] 25X1 25X1

REQUIREMENT

COMIREX P02
Project 200007DP

(S) Comments and queries regarding this report are welcome. They may be directed to [redacted] 25X1
Soviet Strategic Forces Division, Imagery Exploitation Group, NPIC, [redacted] 25X1

[redacted]